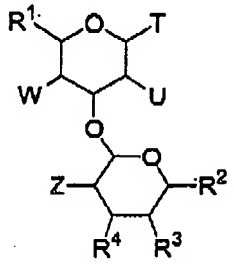
MEUTERMANS et al
Appl. No. 10/531,303
January 21, 2009

AMENDMENTS TO THE CLAIMS:

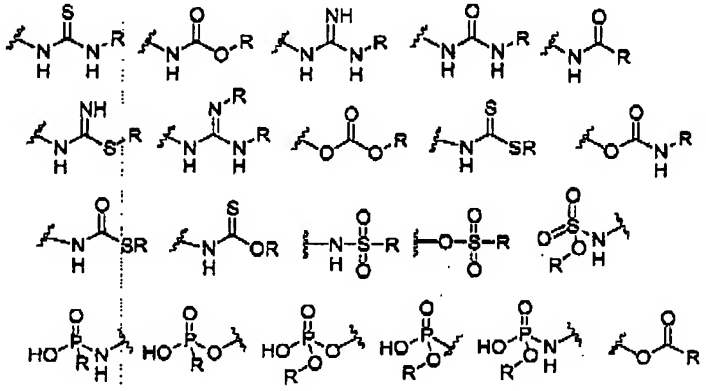
This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of inhibiting bacterial growth by contacting a bacteria with at least one disaccharide compound of General Formula I,



General Formula I

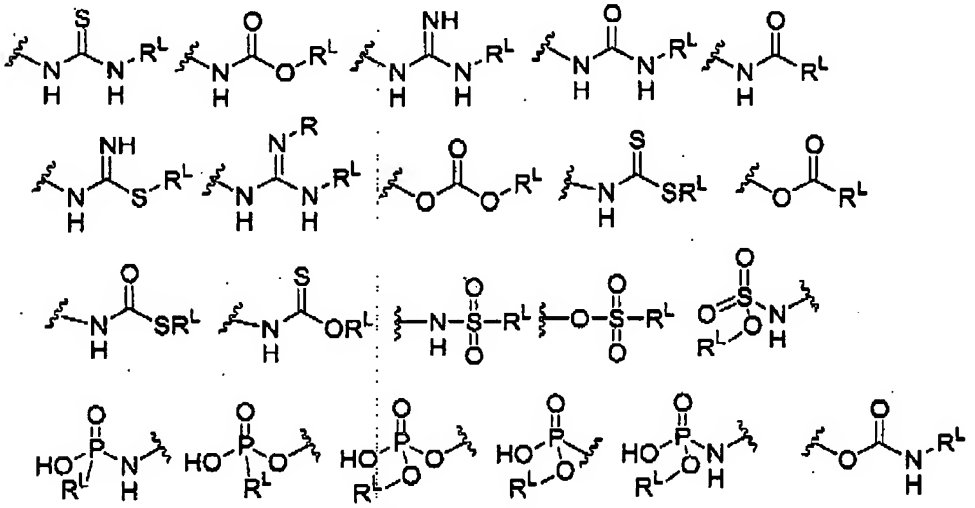
Wherein T is either R or -XR,
X is selected from the group consisting of oxygen, sulphur, NHC(O)-,
R is selected from the group consisting of: H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, arylalkyl or heteroarylalkyl of 1 to 20 carbon atoms,
U and Z are independently selected from the group consisting of: OR, NHR, NR(R) (wherein R may be the same of different), or



R^1 and R^2 are independently selected from the group consisting of: H, CH_3, CH_2XR, and C(O)NHR,

R^3 and R^4 are independently selected from the group consisting of H, OH, OR, NHCOR, and,

W is independently selected from the group consisting of OR^L, NHR^L, NR^LR, or

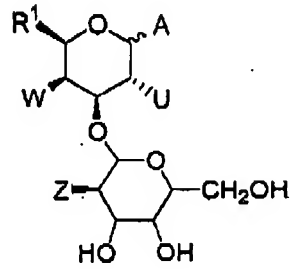


wherein R^L is selected from the group consisting of: a substituted or unsubstituted, linear or branched, saturated or unsaturated C3 to C55 alkyl, heteroalkyl, arylalkyl, alkylaryl chain.

2. (Withdrawn) The method of claim 1, wherein R^L is substituted by a moiety selected from the group consisting of: acidic groups, carboxylic acids, sulfonic acids, phosphoric acids, tetrazoles, or other carboxylic acid mimetics, basic groups, amines, guanidiniums, amidines, imidazoles, oxazoles, or other amine mimetics.

3. (Original) The method of claim 1, wherein one or more R groups is substituted by a moiety selected from the group consisting of: OH, NO, NO_2, NH_2, N_3, halogen, CF_3, CHF_2, CH_2F, nitrile, alkoxy, aryloxy, amidine, guanidiniums, carboxylic acid, carboxylic acid ester, carboxylic acid amide, aryl, cycloalkyl, heteroalkyl, heteroaryl, aminoalkyl, aminodialkyl, aminotrialkyl, aminoacyl, carbonyl, substituted or unsubstituted imine, sulfate, sulfonamide, phosphate, phosphoramide, hydrazide, hydroxamate, hydroxamic acid, heteroaryloxy, carbamoyl, aminoaryl, aminoheteroaryl, thioalkyl, thioaryl or thioheteroaryl.

4. (Original) The method of claim 1, wherein the compound comprises

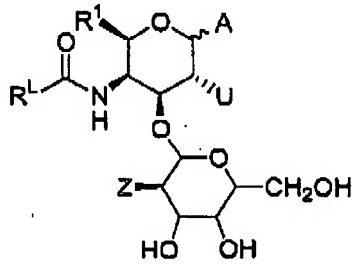


General Formula II

Wherein the disaccharide linkage is alpha or beta,

A is hydrogen, OR or SR.

5. (Original) The method of claim 1, wherein the compound comprises



General Formula III

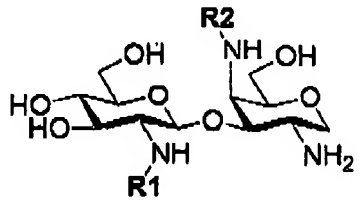
Wherein A is hydrogen, OR or SR.

6. (Original) The method of claim 1, wherein the bacteria is a Gram + bacteria.

7. (Withdrawn) The method of claim 1, wherein the bacteria is a Gram – bacteria.

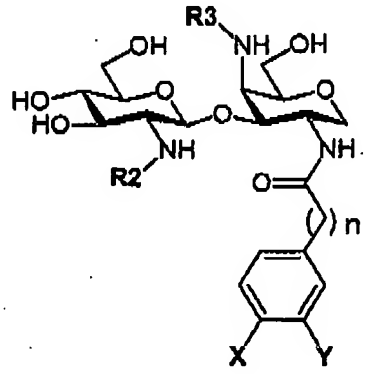
8. (Original) The method of claim 1, wherein the bacteria is selected from the group consisting of an *E-coli*, , *Micrococcus luteus*, *Staphylococcus aureus*, *Staphylococcus aureus* MRSA, *Enterococcus faecalis*, *Enterococcus faecalis* Vancomycin resistant and *Streptococcus pyogenes*.

9. (Withdrawn) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is



wherein R1 is A5 and R2 is A9
and wherein the substituents A are given in TABLE 1

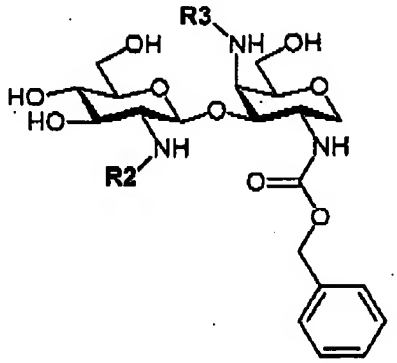
10. (Withdrawn) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is



n	X	Y	R2	R3
1	A1	A10	A11	A7
1	A1	A10	A4	A9
0	A1	A10	A12	A9
0	A1	A10	A5	A7
0	A1	A10	A5	A9
1	A10	A1	A5	A7

and wherein the substituents A are given in TABLE 1

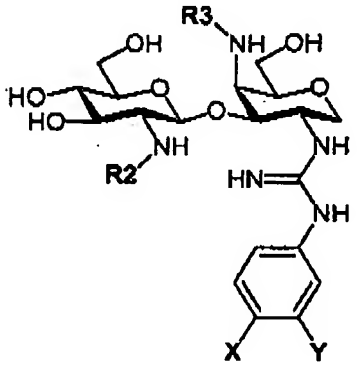
11. (Withdrawn) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is



R2	R3
A5	A7
A5	A9

and wherein the substituents A are given in TABLE 1

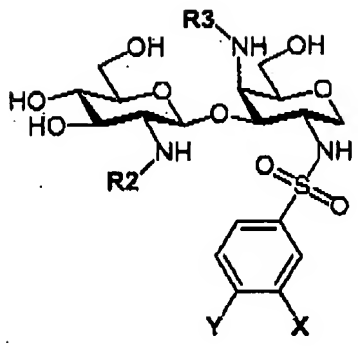
12. (Withdrawn) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is



X	Y	R2	R3
A1	A10	A12	A7
A1	A10	A4	A9
A1	A10	A4	A7
A1	A10	A4	A1
A1	A10	A5	A9
A1	A10	A19	A9
A1	A10	A19	A7
A1	A10	A19	A25
A1	A10	A19	A22
A1	A10	A19	A16
A1	A10	A19	A23
A1	A10	A19	A26
A1	A10	A19	A27
A1	A10	A19	A28
A1	A10	A19	A29
A14	A1	A2	A9
A14	A1	A3	A9
A14	A1	A12	A9
A14	A1	A4	A9
A14	A1	A15	A9

and wherein the substituents A are given in TABLE 1

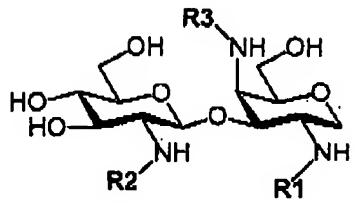
13. (Withdrawn) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is



X	Y	R2	R3
A10	A1	A17	A7
A10	A1	A5	A7
A1	A13	A2	A9
A1	A13	A5	A7
A1	A13	A5	A9

and wherein the substituents A are given in TABLE 1

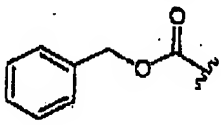
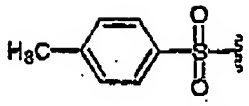
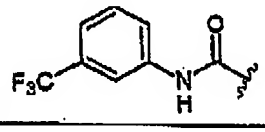
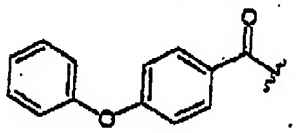
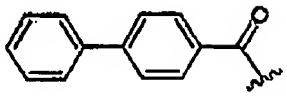
14. (Currently Amended) The method of claim 1, wherein the bacteria is *Staphylococcus aureus* and the compound is

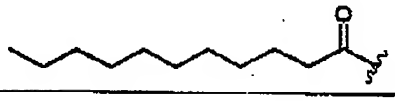
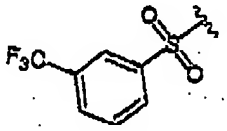
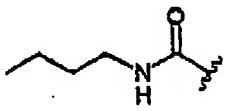
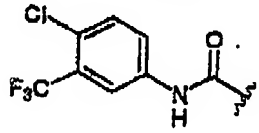


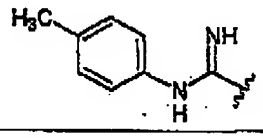
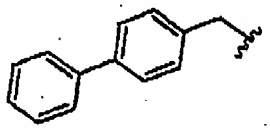
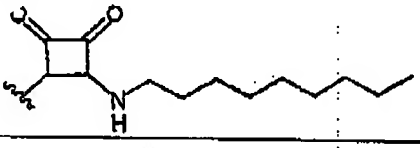
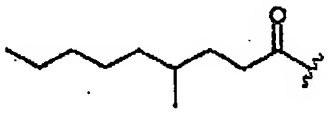
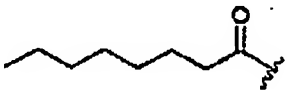
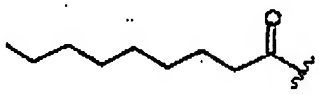
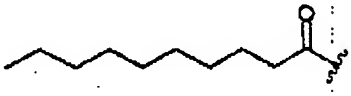
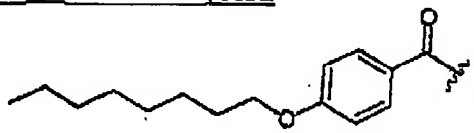
R1	R2	R3
A20	A20	A8
A5	A1	A7
A5	A3	A7
A5	A3	A1
A5	A21	A7
A5	A21	A1
A5	A17	A7
A5	A4	A7
A5	A4	A1
A5	A44	A7
A5	A5	A25
A5	A5	$C_{10}H_{21}$
A5	A5	A39
A5	A5	A40
A5	A5	A22
A5	A5	bis-pentyl
A5	A5	A32
A5	A5	A31
A5	A5	A30
A5	A5	A33
A5	A5	A34
A5	A5	A36
A5	A5	A6
A5	A5	A7
A5	A5	A23
A5	A5	A8

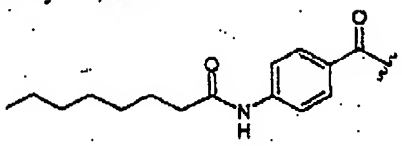
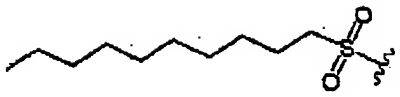
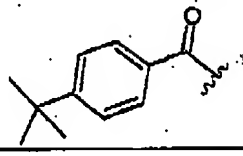
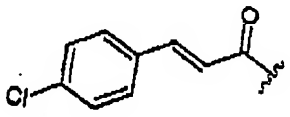
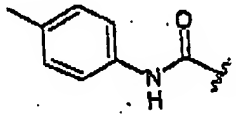
A5	A5	A9
A5	A3	A9
A5	A4	A9
A18	A4	A9

and wherein ~~the substituents A are given in TABLE 1~~

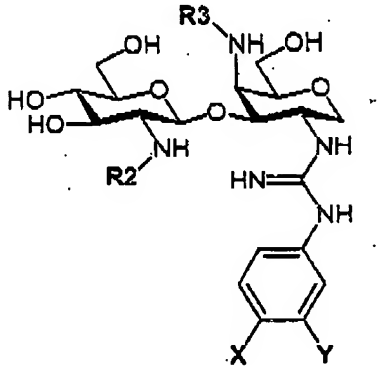
A1 is  , A3 is  , A4 is  , A5 is  , A6 is  , A7 is 

A8 is  , A9 is  , A17 is  , A18 is  , A20 is 

A21 is  , A22 is  , A23 is  , A25 is  , A30 is  , A31 is  , A32 is  , A33 is  , A34

is  , A36 is  , A39 is  , A40 is  , and A44 is  .

15. (Withdrawn) The method of claim 1, wherein the bacteria is *E. coli* and the compound is

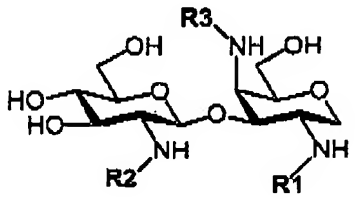


X	Y	R2	R3
A1	A10	A4	A9
A1	A10	A4	A7
A1	A10	A19	A9
A1	A10	A19	A7
A1	A10	A19	A25
A1	A10	A19	A22
A1	A10	A19	A16
A1	A10	A19	A23
A1	A10	A19	A26
A1	A10	A19	A27

A1	A10	A19	A28
A1	A10	A19	A29
A14	A1	A2	A9
A14	A1	A3	A9
A14	A1	A12	A9
A14	A1	A4	A9
A14	A1	A15	A9

and wherein the substituents A are given in TABLE 1

16. (Withdrawn) The method of claim 1, wherein the compound is

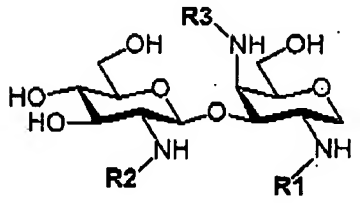


Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9
56	A5	A5	$C_{10}H_{21}$
65	A5	A5	A34
67	A5	A5	A42
68	A5	A5	A32
69	A5	A5	A36
70	A5	A5	A37
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8
77	A5	A5	A9

and wherein the substituents A are given in TABLE 1

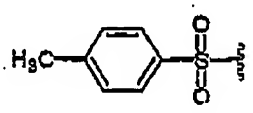
and the bacteria is *Micrococcus luteus* .

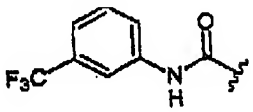
17. (Currently Amended) The method of claim 1, wherein the compound is

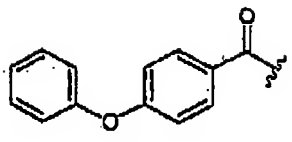


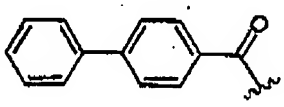
Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9
56	A5	A5	$C_{10}H_{21}$
67	A5	A5	A42
68	A5	A5	A32
69	A5	A5	A36
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8
77	A5	A5	A9

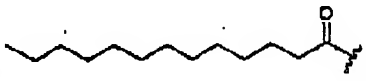
and wherein ~~the substituents A are given in TABLE 1~~

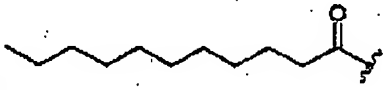
A4 is 

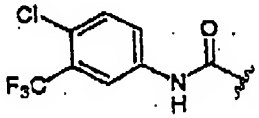
, A5 is 

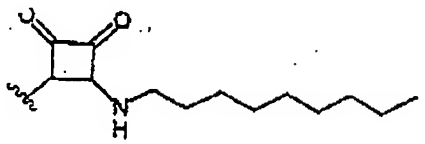
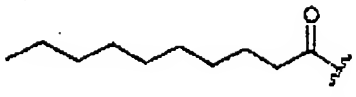
, A6 is 

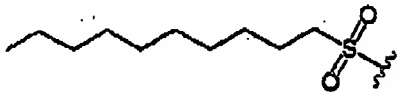
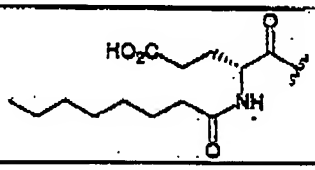
, A7 is 

, A8 is 

, A9 is 

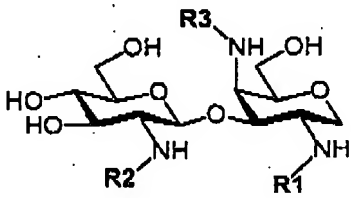
, A20 is 

A23 is  , A32 is 

A36 is  , and A42 is 

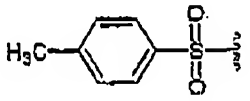
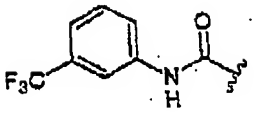
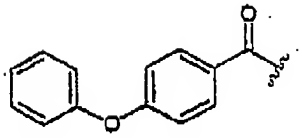
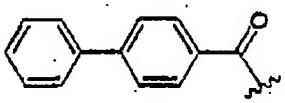
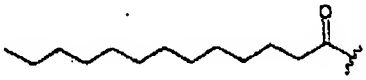
and the bacteria is *Staphylococcus aureus*.

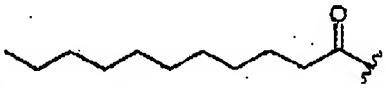
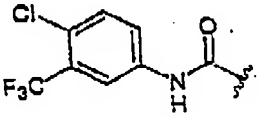
18. (Currently Amended) The method of claim 1, wherein the compound is

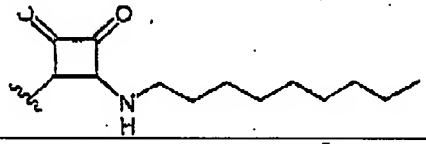
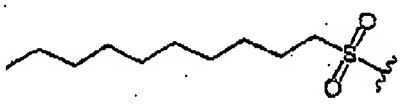


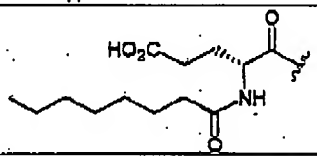
Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9
56	A5	A5	$C_{10}H_{21}$
67	A5	A5	A42
69	A5	A5	A36
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8
77	A5	A5	A9

and wherein ~~the substituents A are given in TABLE 1~~

A4 is  , A5 is  , A6 is  , A7 is  , A8 is 

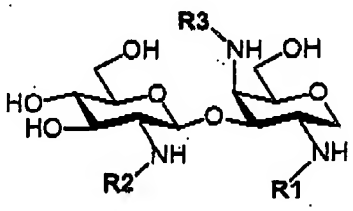
A9 is  , A20 is 

A23 is  , A36 is 

and A42 is 

and wherein the bacteria is *Staphylococcus aureus MRSA.*

19. (Withdrawn) The method of claim 1, wherein the compound is



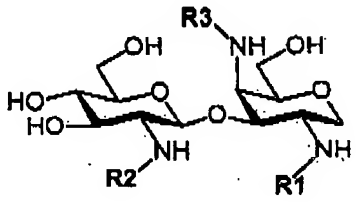
Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9

56	A5	A5	$C_{10}H_{21}$
65	A5	A5	A34
67	A5	A5	A42
68	A5	A5	A32
69	A5	A5	A36
70	A5	A5	A37
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8
77	A5	A5	A9

and wherein the substituents A are given in TABLE 1

and the bacteria is *Enterococcus faecalis*.

20. (Withdrawn) The method of claim 1, wherein the compound is



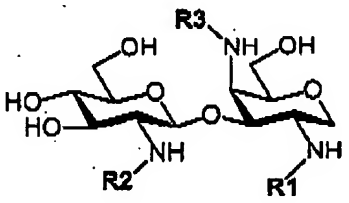
Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9
56	A5	A5	$C_{10}H_{21}$
65	A5	A5	A34
67	A5	A5	A42
68	A5	A5	A32
69	A5	A5	A36
70	A5	A5	A37
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8

77	A5	A5	A9

and wherein the substituents A are given in TABLE 1

and wherein the bacteria is *Enterococcus faecalis* Vancomycin resistant

21. (Withdrawn) The method of claim 1, wherein the compound is



Comp.	R1	R2	R3
42	A20	A20	A8
51	A5	A4	A9
56	A5	A5	$C_{10}H_{21}$
65	A5	A5	A34
66	A5	A5	A41
67	A5	A5	A42
68	A5	A5	A32
69	A5	A5	A36
70	A5	A5	A37
73	A5	A5	A6
74	A5	A5	A7
75	A5	A5	A23
76	A5	A5	A8
77	A5	A5	A9

and wherein the substituents A are given in TABLE 1

and the bacteria is *Streptococcus pyogenes*

22. (Original) A method of inhibiting a bacterial infection in a mammal comprising administering an effective amount of a compound of claim 1 to the mammal.

23. (Withdrawn) An anti-bacterial pharmaceutical composition comprising a compound of claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

24. (Original) The method of claim 1, wherein the bacterium is a resistant or susceptible strain of a Micrococcus, Streptococcus, Enterococcus or Staphylococcus.